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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/758,078 01/10/01 BROWN

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EXAMINER

PEREZ, G

ART UNIT

PAPER NUMBER

2834

DATE MAILED:

06/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/753,078

Applicant(s)

BROWN, DAVID C.

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4,5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brill (U. S. Pat. No. 4,302,720) in view of Stangeland (U. S. Pat. No. 5,112,146).

Brill discloses an electromagnetic induction rotary device comprising:

a rotatable shaft (12) and a fixed stator (11), said shaft (12) and said stator (11) fabricated of nickel-iron alloy (column 3, lines 46-50) having a predetermined coefficient of thermal expansion, said shaft (11) supported for rotation within said stator (12) on bearing assemblies (16a). However, Brill does not disclose that said bearing assemblies have the same coefficient of thermal expansion of said shaft and said stator.

Stangeland discloses that said shaft (32) is supported for rotation within said stator (34) on bearing assemblies (10) and that said bearing assemblies (10) have the same coefficient of thermal expansion of said shaft and said stator (column 2, lines 5-9). Stangeland's invention has the purpose of improving bearing longevity and wear resistance.

It would have been obvious at the time the invention was made to modify the electromagnetic induction rotary device of Brill and provide it with the coefficient of

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thermal expansion relation between the shaft, the stator and the bearings disclosed by Stangeland for the purpose of improving bearing longevity and wear resistance.

2. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brill in view of Stangeland as applied to claim 1 above, and further in view of Watanabe et al. (U. S. Pat. No. 5,059,041).

Brill and Stangeland disclose an electromagnetic induction rotary device as described on item 1 above. Brill also discloses a partial-rotation, torque motor comprising:

a reversibly rotatable shaft (12) rotationally restricted to less than one full turn, and a stator (11) and housing assembly (14) within which said shaft (12) is located, said shaft (12) supported by bearing assemblies (13,16a), said shaft (12), said stator (11) and said housing assembly (14) fabricated of a nickel-iron alloy (column 3, lines 46-50). Brill also discloses that the motor is used in a galvanometer scanner. Stangeland discloses that the thermal expansion of said shaft, said stator and said housing assembly matches the expansion of said ceramic bearing assemblies.

However, neither Brill nor Stangeland disclose that said shaft being electrically isolated from said stator and said housing.

Watanabe et al. disclose that said shaft (4) is electrically isolated from said stator and said housing (2). The invention of Watanabe et al. has the purpose of improving the dimensional accuracy while avoiding the brittleness of the ceramic material.

It would have been obvious at the time the invention was made to modify the electromagnetic induction rotary device of Brill and Stangeland and provide it with an

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insulated shaft as disclosed by Watanabe et al. for the purpose of improving the dimensional accuracy while avoiding the brittleness of the ceramic material.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Guillermo Perez
June 19, 2001